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## ABSTRACT

2        Self-expandable, woven intravascular devices for use as stents (both straight and  
3        tapered), filters (both temporary and permanent) and occluders for insertion and  
4        implantation into a variety of anatomical structures. The devices may be formed from  
5        shape memory metals such as nitinol. The devices may also be formed from  
6        biodegradable materials. Delivery systems for the devices include two hollow tubes that  
7        operate coaxially. A device is secured to the tubes prior to the implantation and delivery  
8        of the device by securing one end of the device to the outside of the inner tube and by  
9        securing the other end of the device to the outside of the outer tube. The stents may be  
10      partially or completely covered by graft materials, but may also be bare. The devices may  
11      be formed from a single wire. The devices may be formed by either hand or machine  
12      weaving. The devices may be created by bending shape memory wires around tabs  
13      projecting from a template, and weaving the ends of the wires to create the body of the  
14      device such that the wires cross each other to form a plurality of angles, at least one of the  
15      angles being obtuse. The value of the obtuse angle may be increased by axially  
16      compressing the body.